

IN THE CLAIMS:

The following is a complete listing of the claims, and replaces all earlier version and listings.

Claims 1. - 11. (canceled)

12. (new) An image processing method which maps a first color gamut into a second color gamut, comprising the steps of:

setting first sample points in the first color gamut;

obtaining second sample points by mapping the first sample points to the second color gamut;

setting a gradation line by using the plural first sample points;

mapping the gradation line by using the second sample points corresponding respectively to the plural first sample points; and

mapping an input color to the second color gamut by using the mapped gradation line.

13. (new) A method according to Claim 12, wherein the gradation line is obtained by using at least one of a B-spline curve, a rational B-spline curve, a Bézier curve, and a one- or more-dimensional spline curve.

14. (new) A method according to Claim 12, wherein the first sample points are located on six faces of an R (red) face, a G (green) face, a B (blue) face, a C (cyan) face, an M (magenta) face and a Y (yellow) face in the first color gamut.

15. (new) A method according to Claim 12, wherein the mapping of the sample points to the second color gamut includes two-dimensional mapping on a lightness-chroma plane according to the first color gamut and the second color gamut, and adjustment of a hue component.

16. (new) An image processing apparatus which maps a first color gamut into a second color gamut, comprising:

a first sample point setting unit adapted to set first sample points in the first color gamut;

an obtaining unit adapted to obtain second sample points by mapping the first sample points to the second color gamut;

a gradation line setting unit adapted to set a gradation line by using the plural first sample points;

a gradation line mapping unit adapted to map the gradation line by using the second sample points corresponding respectively to the plural first sample points;  
and

an input color mapping unit adapted to map an input color to the second color gamut by using the mapped gradation line.

17. (new) A storage medium which computer-readably stores a program to cause a computer to execute an image processing method which maps a first color gamut into a second color gamut, said method comprising the steps of:

setting first sample points in the first color gamut;

obtaining second sample points by mapping the first sample points to the second color gamut;

setting a gradation line by using the plural first sample points;

mapping the gradation line by using the second sample points corresponding respectively to the plural first sample points; and

mapping an input color to the second color gamut by using the mapped gradation line.